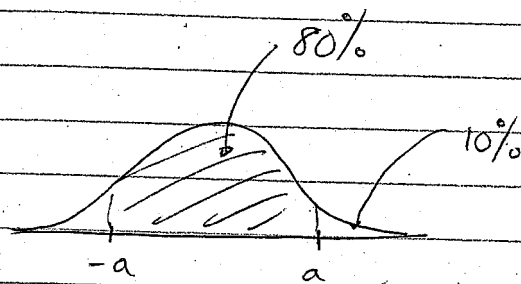


Assignment #12: SOLUTIONS

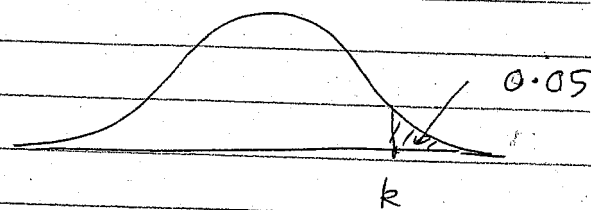
1 (p. 486)

$$\textcircled{4} \frac{\bar{Y} - 27.6}{S/\sqrt{n}} = T_8$$



$$\Rightarrow a = t_{0.1, 8}$$

$$\textcircled{5} \frac{\bar{Y} - 15.0}{S/\sqrt{n}} = T_{10}$$



$$\Rightarrow k = t_{0.05, 10}$$

7 99% C.I.:

$$\mu = \hat{\mu} \pm t_{\frac{\alpha}{2}, n-1} \frac{s}{\sqrt{n}}$$

$\hat{\mu}$ = sample mean

s = sample standard deviation

$$n = 10$$

$$\alpha = 0.01$$

(10) 90% C.I. $\alpha = 0.1$, $n = 10$ (2)

$$\mu = \hat{\mu} \pm t_{\frac{\alpha}{2}, n-1} \frac{s}{\sqrt{n}}$$

$$\hat{\mu} = \text{sample mean} = \frac{1}{10} \sum y_i$$

$$s = \text{sample standard dev.} = \frac{1}{9} \sum y_i^2 - \frac{10}{9} \hat{\mu}^2$$

$$t_{\frac{\alpha}{2}, n-1} = t_{0.05, 9}$$

(14) Use 95% C.I. $\alpha = 0.05$, $n = 9$

$$\mu = \hat{\mu} \pm t_{\frac{\alpha}{2}, n-1} \frac{s}{\sqrt{n}}$$

$$\hat{\mu} = 59.540$$

$$s = 6.860$$

$$n = 9$$

$$t_{\frac{\alpha}{2}, n-1} = t_{0.025, 8}$$